TECHNOLOGY AREA

DEFINITION	
Name	Database Management Systems (DBMS)
Description	Database Management relates to the organization of data and information into physical structures, which are then accessed and updated through the services of a database management system. It defines the roles, standards, and technologies for physical database definition and design, the various database management options, and administration principles to enable the development of the enterprise-wide resource. The Database Management discipline builds on Data Management to provide structure in a manner that enables Knowledge Management and Application Engineering while adhering to all designated Interoperability, Security and Privacy domain requirements.
Rationale	Few consistent statewide standards or best practices were in place when the current database systems and corresponding databases were developed. Data is stored in multiple database systems on multiple platforms using multiple methods / designs across the state which are used to perform day-to-day operations. If these distributed systems were organized in known, predictable, and meaningful designs, Missouri government could more easily provide this valuable information to support the state's business services, decision-makers and general public. A goal is a database management protocol or process that is designed using standards and best practices whereby it can be consistently implemented across the state. The protocols and processes should be designed to be re-useable, shareable, accurate, up-to-date, secure, and able to be managed from an enterprise perspective. The desire is to move from a business construct where a majority of the data was designed for access by single application systems within a single agency, to one where there is access by multiple application systems in multiple agencies simultaneously. Distributing data to appropriate platforms will place more importance on administration and database management. This becomes the key to maintaining the overall information architecture.
Benefits	• Increase and maintain data's integrity and relevance (enforcement) • Maintain a stable environment (database structure, access) • Ensure data reliability (backup/recovery, retention) • Ensure data availability (making sure users can get to the data when it's needed) • Ability to protect sensitive data (security) • Ability to ensure proper access to data (authorization) • Ensures efficient access to data and storage of data (performance) • Allows for maximizing the investment in hardware and software (cost)

ASSOCIATED ARCHITECTURE LEVELS	
Specify the Domain Name	Information
Specify the Discipline Name	Database Management

KEYWORDS	
List Keywords	Database management systems, DBMS, Relational, Hierarchical, Network, Object-relational, Object-oriented, Integrity, Security, Management, Administration, Performance, Accessibility, Availability, Readiness, Standards Compliance, Scalability, Extensibility

ASSOCIATED COMPLIANCE COMPONENTS	
List the Compliance Component Names	Integrity Security

	Management & Administration Performance Accessibility Availability / Readiness Standards Components Scalability Extensibility

ASSOCIATED PRODUCT COMPONENTS	
List the Product Component Names	Relational DBMS Hierarchical DBMS Network DBMS Object-Relational DBMS Object-Oriented DBMS

CURRENT STATUS				
Provide the Current Status	☐ *In Development*	☐ *Under Review*	☒ *Approved*	☐ *Rejected*

AUDIT TRAIL			
Creation Date	5-26-04	*Date Approved / Rejected*	2-8-05
Reason for Rejection			
Last Date Reviewed		*Last Date Updated*	
Reason for Update			